

an instance of the theory of "repulsion" (described P. Z. S. 1894, p. 144), by which when two allied species live together in the same place, and can gain no advantage by mutual resemblance ("mimicry"), they often intensify their colour differences to the greatest possible extent, in order probably that their members shall be enabled to distinguish comrades from rivals as readily as possible.

XX.—*Descriptions of Four new South-American Mammals.*

By OLDFIELD THOMAS.

Oxymycterus lanosus, sp. n.

General appearance exceedingly like that of *Akodon xanthorhinus*, Waterh. Fur very soft, thick, and woolly, the wool hairs about 9 millim. long on the back, and the longer straight hairs forming a thick fringe 5 or 6 millim. beyond the wool hairs. General colour deep yellowish olive all over above, the sides brighter yellow along the junction with the belly. Under surface slaty grey, the tips of the hairs buffy white. Ears small, not projecting above the fur, well haired. Upper surface of hands and feet shining white; pollex with a blunt claw, hardly long enough to be called a true claw, but longer and more compressed than a "nail." Fifth hind toe reaching to the middle of the basal phalanx of the fourth. Tail about as long as the body without the head, well haired, blackish brown above, yellowish white below and on the sides.

Skull with a narrow slender muzzle and a very large rounded brain-case. Nasals narrow, pointed, concave above when viewed in profile. Interorbital region broad, smoothly rounded, convex above, without ridges. Brain-case broad, flattened, rounded. Interparietal small. Anterior zygoma-root very narrow, slanted forwards. Anterior palatine foramina reaching back one third of the length of m^1 ; hinder edge of palate opposite back of m^3 .

Incisors narrow, slender, very pale yellow above and white below. Molars as usual.

Dimensions of the type, in skin, male:—

Head and body (c.) 80 millim.; tail 51; hind foot (moistened) 20·6.

Skull: basilar length 18·4, greatest breadth (across brain-case) 12·4; nasals $9·3 \times 2·8$; interorbital breadth 4·8; palate length from henselion 9·9; diastema 6·1; palatal foramina $5·3 \times 2$; length of upper molar series 4.

Hab. Monteith Bay, Straits of Magellan.

Type. B.M. 80.7.28.11. Collected and presented by Dr. R. W. Coppinger, of H.M.S. 'Alert.'

The skin on which this species is founded is that mentioned under "*Hesperomys (Habrothrix) xanthorhinus*" in my account of the 'Alert' collections (P. Z. S. 1881, p. 5). That determination was based mainly on the spirit-specimen referred to at the same time, which is undoubtedly a true *Akodon* (= *Habrothrix*). A comparison of the skulls now shows not only that the two, like as they are externally, are different as species, but that the Monteith Bay skin belongs to the *Oxymycterus* group, as is especially shown by its narrow slanting zygoma-root, slender muzzle, and broad brain-case. In that group no species as yet described bears any resemblance to it.

Dasyprocta Kalinowskii, sp. n.

Size rather large. Fur ringed with black and yellowish rufous, the elongated hairs of the rump white with black tips, contrasting markedly with the rest of the body. Area round the root of tail black, abruptly defined from the white crest-hairs. Under surface yellowish, grizzled with brown. Feet blackish. Tail about an inch in length, naked.

Skull elongate, not unlike that of *D. variegata* and *fuliginosa*, but with the muzzle rather broader and more trumpet-shaped.

Dimensions of the type, an adult male:—

Head and body (measured in flesh by collector) 6·30 millim.; hind foot 125.

Skull: basilar length 89, greatest breadth 54; nasals 46×22 ; interorbital breadth 33·5; diastema 30; upper molar series 20·5.

Hab. Idma, Valley of Santa Ana, Cuzco, Peru. Alt. 4600 ft. Coll. J. Kalinowski, Nov. 2, 1894.

This handsome Aguti may be readily distinguished from any species hitherto described by the peculiar coloration of its long rump-hairs, which, white with black tips, are quite unlike those of any other species.

It was obtained by, and is named in honour of, Mr. J. Kalinowski, the well-known Polish collector, to whom science is already indebted for the discovery of so many interesting Peruvian mammals.

Peramys adustus, sp. n.

Size small. Fur close and short, only about 4 millim. long on the back. Colour all over above uniform finely grizzled brown, with a slight yellowish tinge; tip of muzzle blackish. Under surface coloured about as in *Mus musculus*; line of demarcation on sides little marked. Ears very short, practically naked. Hands and feet greyish brown, digits naked. Tail practically naked, its few fine hairs black.

Skull low and flattened. Nasals much expanded behind. Posterior lower premolar slightly smaller than the middle one.

Dimensions of the type, in skin :—

Head and body 100 millim.; tail 53; hind foot (moistened) 15; ear (above head) (c.) 3.

Skull: basal length (c.) 25; nasals 12.5×4.5 ; interorbital breadth 6; breadth of brain-case 11; palate length 15; combined length of m^{1-3} 5.1. Lower jaw, condyle to tip of incisors 20.5; front of canine to back of m_4 12.

Hab. W. Cundinamarca, in the low-lying hot regions.

Type. B.M. 97.7.2.1.

This species has most resemblance in colour to *P. domesticus*, Wagn., but differs by its much smaller size and smaller ears. From the known species of its own size it is readily distinguishable by its uniform brownish coloration.

Ichthyomys trichotis, sp. n.

Size smaller than in the other species. Colour dark smoky or slaty grey all over above and below, with the exception of the chest and centre line of the belly, which are white. Ears short and narrow, their conch only standing up about 4 millim. above the crown, thickly clothed with hairs similar in colour and texture to those on the head, and of an equal length to that of the conch itself; as a result the ears are quite lost among the general fur of the head. Upper surface of hands silvery white, of feet rather more brownish; hind toes apparently rather less broadly webbed than in the other species, and the pads smaller and more distinctly defined. Tail about as long as the body without the head, well haired, blackish throughout except at the extreme tip, which, as in *I. hydrobates* and *Söderströmi*, is white.

Skull unfortunately too much broken in the only specimen to be described, and it can only be noted that the incisors, both above and below, are much thinner and narrower transversely and antero-posteriorly, and that the molars are of about the same size and proportions as those of *I. hydrobates*, or m^3 may be a little smaller.

Dimensions of the type, in skin :—

Head and body 130 millim.; tail 114; hind foot 28.5; ear, above head, 4.

Skull: length of upper molar series 4.8, of lower molar series 4.9. Lower jaw, bone only, 13.5; to incisor tip 16.3.

Hab. W. Cundinamarca, in low country near to Magdalena R.

Type. B.M. 97.7.2.2.

This species resembles *I. hydrobates*, and, if really different,

I. Söderströmi, in the colour of its tail, but differs both from these and *I. Stolzmanni* by the extreme hairiness of its ears, the restriction of the white of the under surface to the chest and centre of belly, and by the slenderness of its incisors.

XXI.—On the Anatomy of *Apera Burnupi*, E. A. Smith.

By WALTER E. COLLINGE, F.Z.S., Assistant Lecturer and Demonstrator in Zoology and Comparative Anatomy, Mason University College, Birmingham.

[Plate V.]

THE genus of slugs known as *Apera* was originally constituted by Binney (2) in 1879 under the term *Chlamydephorus*. Heynemann (6), however, suggested the term *Apera*, on the ground that Binney's name indicated a false characteristic, viz. the presence of a mantle-lobe. Later, Mr. Edgar A. Smith (8) pointed out that Agassiz (1) had employed the term *Chlamydephorus*, which is practically the same as that used by Binney, for a group of mammals, a fact which Heynemann does not seem to have been aware of.

There are only two known species of this genus, namely, *A. Gibbonsi*, W. G. Binney, from Natal (2), and *A. Burnupi*, E. A. Smith, from Natal (8).

My best thanks are due to M. Edgar A. Smith, for his kindness in supplying me with the material upon which these observations on the anatomy have been made.

The specimen from which all the figures were drawn measured 49 millim. in length. It corresponded in all external features to the original description (8). Mr. Edgar A. Smith has pointed out that the carinæ are doubtless much accentuated in alcoholic specimens; this I can confirm, for on being immersed in very weak alcohol they were much less conspicuous, the dorsum being more convex. Mr. Smith has since sent me a note of some observations he made upon a living example, in which he points out that the keels are visible but less acute than in the contracted state. In Heynemann's figures (6, T. 2. figs. 5 & 6) of *A. Gibbonsi* the keel which limits the back is not shown. This same author (6, p. 19), although only acquainted with the external features of *A. Gibbonsi*, suggested that the genus *Apera* belonged to the Testacellidæ; on p. 19 he writes:—"Dann springt uns sofort die nahe Verwandtschaft mit *Testacella* in die Augen, die gemeinsame allgemeine Gestalt (s. Fig. von Gibbons), die gemeinsame Lage der Genital-, Athem- und Afteröffnung, die ähnliche strahlige Könnelung um diese Körperöffnung herum, die ähnliche Runzelung über die Länge des Rückens (s. Figur von Gibbons und seine